California Public Employees' Retirement System

Independent Review of the Actuarial Valuation

for the Judges' Retirement System

as of June 30, 2010

Report Completed In Satisfaction of

Task 3 of Contract 2009-5377

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Overview

EFI Actuaries has conducted an independent review of the Actuarial Valuation of the Judges' Retirement System (JRS) as of June 30, 2010. Overall, we were able to certify that the liabilities and costs computed in this valuation are reasonable and were computed in accordance with generally accepted actuarial principles and practices. However, EFI did discover a problem with the total actuarial liability for terminated members and for members entitled to deferred benefits under a Domestic Relations Order (DRO). A discussion of this issue is presented below.

Background

The Judges Retirement System provides pensions and ancillary benefits to California state judges who were elected or appointed before November 9, 1994. Judges elected or appointed on or after that date are covered under Judges Retirement System II (JRS II). JRS and JRS II are separate retirement plans with separate memberships, separate asset pools, and no financial interrelationship.

A judge who has reached age 60 and is credited with 20 or more years of service under the System will be awarded a lifetime pension of 75% of pay in the last judicial office held. Death, disability, and termination benefits are also paid from the System.

The System is financed by employer and employee contributions and the investment return on System assets. Participants contribute 8% of pay. Employer Contributions to the plan are determined using the pay as you go method, with no prefunding of liabilities.

Methodology

Our review and certification involves three steps:

- Review of Methods and Assumptions

  The actuarial assumptions and methods employed in the JRS Valuation were reviewed by EFI in order to establish whether they meet acceptable standards of actuarial practice.

- Independent Valuation

  In order to verify the correctness of calculations in the JRS Valuation, EFI conducted an independent valuation using its own actuarial model. This independent valuation determines whether actuarial assumptions and methods are applied properly and yield the reported results.

  In preparing our valuations, we relied on member and asset data supplied by CalPERS staff. As is usual in actuarial valuations, this data was neither audited nor independently verified.

- Reconciliation of Results

  In the event that the figures computed by EFI fall outside of the established tolerances versus those computed by CalPERS' staff, reconciliation is required.

  This reconciliation proceeds in four steps:

  1. Establishing that the same member data has been used by EFI and by staff;
  2. Researching methodological differences between the EFI and staff approaches to computing liabilities and costs;
  3. Comparing individual test life results to uncover subtle differences in approach that may result in material differences in liabilities and costs.
  4. Discuss with CalPERS Staff the nature and magnitude of the discrepancy and come to agreement on the cause and remedy.

Review of Methods and Assumptions

We have determined that the actuarial methods and assumptions used in the JRS Valuation are within acceptable standards of actuarial practice.

Actuarial assumptions used to compute JRS liabilities and employer costs include:

- A 4.50% annual rate of investment return, net of all expenses;
- Annual salary increases of 3.25%;
- Annual inflation of 3.00%
- Retirement between the ages of 60 and 80 after 10 years of service;
- Termination rates from 0.3% to 2.5% per year, depending on age and service;
- Active and retired mortality rates developed based on actual CalPERS experience during the period from 1997 to 2007.

More detailed information concerning the valuation assumptions can be found in the 2010 CalPERS Experience Study Report. EFI also performed a review of this Experience Study, and evaluated demographic assumptions as part of that review.

Both CalPERS staff and EFI ignored the possible impact of benefit limitations under Internal Revenue Code Section 415 on liabilities and contribution rates. The effect of this Code section on liabilities would be immaterial.

The JRS I System is nearly unfunded; benefits are paid as they come due, and no significant assets have been accumulated. All new judges now become members in JRS II. Therefore, the active membership in JRS I will gradually diminish, and there will be a decreasing payroll over which to fund the cost of benefits. Considering the forgoing, the assumptions listed above are appropriate for this valuation.

Independent Valuation

The JRS Valuation was performed by CalPERS staff using the Actuarial Valuation System (AVS). EFI validated the calculations by creating an *independent* actuarial model to develop the valuation results. The only data common to the models was the participant data; the EFI model was developed separately, without reference to the one used by staff for the Valuation.

As established in our Proposal of Services, we expect the values of comparable items derived from the two models to differ by less than the percentages shown in the following table.

Calculated Item	Acceptable Tolerance
Number of members- active, retired, inactive	0%
Annual payroll and member contributions	0%
Present value of pay; present value of member contributions	1%
Present value of benefit obligations	5%
Annual normal cost, employer contribution rates	5%

These tolerances are sufficiently stringent to detect material differences between the models. Differences outside of the Acceptable Tolerances listed above would not necessarily cause a failure to certify the valuation, but would result in additional scrutiny and reconciliation to determine the reasons.

Tables 1 and 2 below show the principal results of our independent valuations.

Reconciliation of Results

As seen in Table 1, one area in which the valuation results were not within the expected tolerance levels was the Present Value of Benefits for inactive members with a deferred benefit (including those members with Domestic Relations Orders (DROs)). Through an analysis of test lives, we discovered that the liability for these participants was computed as their contribution balance, which is generally much lower than the value of their deferred benefits. Due to the magnitude of the discrepancy - a 245% difference - this issue was immediately brought to the attention of the CalPERS staff.

After internal review by CalPERS, it was discovered that the decrease in liabilities for this group was caused by a glitch related to a programming change to the CalPERS valuation system. This change was intended to reflect the updated retirement assumptions for vested terminated members; the unintended result was that vested terminated members were valued with only their current account balance, rather than the much larger present value of deferred benefit payments.

We discussed the issue with CalPERS staff, and our understanding is that the programming error has been fixed and unlikely to impact future valuations.

Other than this discrepancy, the valuation results computed by EFI are very close to those computed by CalPERS staff.

Table 1: Independent Valuation Results

	CalPERS JRS Valuation	EFI Independent Valuation	EFI to PERS Difference	Within Tolerance
1. Present Value of Benefits for Active Members	$ 1,151,075,812	$ 1,183,132,060	2.78%	Yes
2. Present Value of Benefits for Inactive Members				
Deferred Vested & DRO	26,678,671	91,920,534	244.55%	No
Receiving Benefits	2,378,240,882	2,418,933,231	1.71%	Yes
Total	$2,404,919,553	$2,510,853,765	4.40%	Yes
3. Total Present Value of Benefits	$3,555,995,365	$3,693,985,825	3.88%	Yes
4. Actuarial Accrued Liability for Active Members	1,024,461,351	1,054,775,299	2.96%	Yes
5. Total Actuarial Accrued Liability (4) + (2)	$3,429,380,904	$3,565,629,064	3.97%	Yes
6. Assets	63,828,344	63,828,344	0.00%	Yes
7. Unfunded Actuarial Accrued Liability (UAAL) [(5) – (6)]	$3,365,552,560	$3,501,800,720	4.05%	N/A
8. Amortization of UAAL	$1,265,245,323	$1,316,466,436	4.05%	N/A
9. Employer Normal Cost	$42,603,749	$42,885,007	0.66%	Yes
10. Actuarial Required Contribution (ARC) [(7) + (9)] * 1.045	**$1,366,702,280**	**$1,420,522,258**	**3.94%**	**Yes**

Table 2: Demographic Comparison

Number of Members	CalPERS JRS Valuation	EFI Independent Valuation	EFI to PERS Difference	Within Tolerance
Active	468	468	0.00%	Yes
Retired	1,843	1,843	0.00%	Yes
Inactive	67	67	0.00%	Yes
Salaries and Contributions				
Total Payroll	$85,947,377	$85,947,377	0.00%	Yes
Present value of Payroll	$224,475,294	$222,324,573	-0.96%	Yes